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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,151	03/16/2004	Mitsuhiro Yamada	36856.1224	2177

35510 7590 05/06/2005  
KEATING & BENNETT, LLP  
10400 EATON PLACE  
SUITE 312  
FAIRFAX, VA 22030

EXAMINER

AGUIRRECHEA, JAYDI A

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/801,151	<b>Applicant(s)</b> YAMADA ET AL.	
	<b>Examiner</b> Jaydi A. Aguirrechea	<b>Art Unit</b> 2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Wajima (US6232699).

Wajima discloses an energy trap resonator component utilizing third overtone of a thickness longitudinal vibration comprising a piezoelectric substrate (2) having a first (2a) and a second (2b) major surfaces that is polarized in a direction of the thickness between the first and second major surfaces; a first vibrating electrode (3) disposed on a portion of the first major surface of the piezoelectric substrate, a second vibrating electrode (4) disposed on a portion of the second major surface of the piezoelectric and facing the first vibrating electrode with the piezoelectric substrate interposed there between; wherein, each of the first and second vibrating electrodes has a substantially elliptical shape (Figure 12a), and wherein a flattening ratio (a/b) represents the major axis diameter of the substantially elliptical shape electrode. Wherein, a represent the major axis and b represents the minor axis diameter of the substantially elliptical shape electrode; and the first and second casing substrate (32,35) are respectively laminated on the top and bottom surfaces, wherein the vibrating cavities (31a) are provided between the first vibrating electrode and the first casing substrate and between the second vibrating electrode and the second casing substrate.

With regards to claim 2, Wajima discloses the first and second major surfaces having a rectangular shape.

With regards to claim 3, Wajima discloses first and second extension electrodes connected to the vibrating electrodes on the surfaces of the piezoelectric substrate and a line width of the extension electrodes being narrower than a minor axis diameter of the vibrating electrodes.

With regards to claim 4, Wajima discloses the casing substrates having recesses on the surfaces facing the energy trap piezoelectric resonator. (See figure 2)

With regards to claim 5, Wajima discloses the adhesive layer (9) between the first casing substrate and the piezoelectric resonator. (Figure 15)

With regards to claim 6, Wajima discloses the frame-shaped damping member arranged on the periphery of the surface of the piezoelectric substrate. (Figure 15)

With regards to claim 8, Wajima discloses the casing substrates made of an insulating ceramic.

With regards to claim 9, Wajima discloses the damping member (8) made of epoxy.

***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wajima.

Wajima discloses the claimed invention except for the damping material having a higher elastic modules than that of the first and second adhesive layer; and fails to disclose the thickness of the damping layer being 40μm or more.

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It would have been obvious at the time of the invention was made to select the damping layer to have a thickness in a range of 40 $\mu$ m or more, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

It would have been obvious at the time of the invention was made to select a material for the damping layer to have a higher elastic modules than that of the first and second adhesive layers since it has been held to be within the ordinary skill in the art to select a material on the basis of it's suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

### ***Response to Arguments***

5. Applicant's arguments filed on 2/15/05 have been fully considered but they are not persuasive.

Applicant's argument are directed to the shape of the electrodes and the flattening ratio  $1.2 < a/b < 1.45$ . It is the Examiner's position that on one hand, at sight, the Figure 12a shows a ratio  $a/b$  larger than 1.2. On the other hand, it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Therefore, the Examiner maintains the rejection as proper.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaydi A. Aguirrechea whose telephone number is 571-272-2018. The examiner can normally be reached on M-Th 9-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren E. Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
JAA  
4/25/05

  
TOM DOUGHERTY  
PRIMARY EXAMINER